

CLAIMS

1. A magnetic damper comprising a movable braking plate for receiving an operating element of an actuator, and a stator for attracting the braking plate by a magnetic force, wherein a magnetic attraction force acting between the stator and the braking plate is used as a braking force for stopping the operating element.
2. The magnetic damper according to claim 1, wherein the braking plate can adsorb the operating element by a magnetic force.
3. The magnetic damper according to claim 1, wherein a buffering member is disposed on an abutment surface of the braking plate with respect to the operating element.
4. The magnetic damper according to claim 2, wherein a buffering member is disposed on an abutment surface of the braking plate with respect to the operating element.
5. An actuator having a magnetic damper comprising an operating element which moves together with a member which takes out an output, and a magnetic damper which damps and stops the operating element at a stroke end, wherein the magnetic damper includes a movable braking plate which receives the operating element, and a stator which attracts the braking plate by a

magnetic force, and a magnetic attraction force acting between the stator and the braking plate as a braking force for stopping the operating element.

5 6. An actuator having a magnetic damper comprising cylindrical yokes having a pair of opposed polar teeth, an exciting coil wound around the yokes, an operating element having a cylindrical permanent magnet which is axially movably disposed in hollow portions of the yokes and which is provided with north
10 pole and south pole polarized in its radial direction, an output shaft connected to the operating element, and a magnetic damper which damps and stops the operating element at a stroke end, wherein

the magnetic damper includes a movable braking plate for
15 receiving the operating element, and a stator for attracting the braking plate by a magnetic force, the yokes function as the stator, and a magnetic attraction force acting between the yokes and the braking plate is used as a braking force for stopping the operating element.

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7. The actuator according to claim 5, wherein the operating element and braking plate can adsorb each other by a magnetic force.

25 8. The actuator according to claim 6, wherein the operating element and braking plate can adsorb each other by a magnetic force.

9. The actuator according claim 5, wherein a buffering member is disposed on an abutment surface of the braking plate with respect to the operating element.

5 10. The actuator according claim 6, wherein a buffering member is disposed on an abutment surface of the braking plate with respect to the operating element.

11. The actuator according claim 7, wherein a buffering member
10 is disposed on an abutment surface of the braking plate with respect to the operating element.

12. The actuator according claim 8, wherein a buffering member
15 is disposed on an abutment surface of the braking plate with respect to the operating element.

13. The actuator according to claim 6, wherein the braking plate is formed into an annular shape and disposed on side surfaces of the yokes so as to adsorb on the side surfaces, and the shaft
20 passes through the braking plate.

14. The actuator according to claim 13, wherein the operating element and the braking plate are attractive with each other by magnetic force, and a cushioning member is disposed on a surface
25 of the braking plate that abuts the operating element.